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Assistant Commissioner for Patents,
Washington, D.C. 20231,
On April 10, 2001

The Law Offices of Jonathan Alan Quine

By Alexandra Allison
Alexandra Allison

Attorney Docket No. 02-102320US
Client Ref. No. 0154.003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Juha Punnonen, *et al.*

Application No.: 09/760,388

Filed: January 10, 2001

For: MONOCYTE-DERIVED
DENDRITIC CELL SUBSETS

Examiner: Unassigned

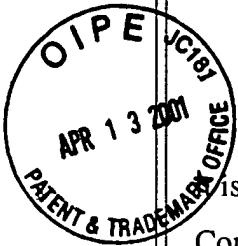
Art Unit: Unassigned

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR § 1.97 and
§ 1.98

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.



Applicant believes that no fee is required for submission of this statement, since is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

Gwynedd Warren
Reg. No. 45,200

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Substitute for form 1449A-B/PTO

Complete if Known

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Application Number	09/760388
Filing Date	January 10, 2001
First Named Inventor	Juha Punnonen
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	02-102320US

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	AA	5,512,463		Stemmer	04-30-1996	
	AB	5,514,588		Varadaraj	05-07-1996	
	AC	5,605,793		Stemmer	02-25-1997	
	AD	5,763,239		Short et al.	06-09-1998	
	AE	5,789,228		Lam et al.	08-04-1998	
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	AJ	5,830,721		Stemmer et al.	11-03-1998	
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	AO	5,925,749		Mathur, et al.	07-20-1999	
	AP	5,928,905		Stemmer, et al.	07-27-1999	
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	AS	5,942,430		Robertson, et al.	08-24-1999	
	AT	5,948,666		Callen, et al.	09-07-1999	
	AU	5,958,672		Short, Jay M.	09-28-1999	
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	AW	5,962,258		Mathur, et al.	10-05-1999	
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	AZ	5,985,646		Murphy, et al.	11-16-1999	
	BA	5,994,126		Steinman et al.	11-30-1999	

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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BB	6,001,574		Short et al.	12-14-1999	
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FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	BO	WO	94/02156		The Board of Trustees of Leland Stanford Junior University	02-03-1994		
	BP	WO	97/07205		Novo Nordisk A/S	02-27-1997		
	BQ	WO	97/20078		Affymax Technologies	06-05-1997		
	BR	WO	97/24447		Chiron Viagene, Inc.	07-10-1997		
	BS	WO	97/25410		Novo Nordisk A/S	07-17-1997		
	BT	WO	97/29182		The Rockefeller University	08-14-1997		
	BU	WO	97/29183		US Dept. of Health and Human Services	08-14-1997		
	BV	WO	97/35957		Maxygen, Inc.	10-02-1997		
	BW	WO	97/35966		Maxygen, Inc.	10-02-1997		
	BX	WO	97/44361		Recombinant	11-27-1997		

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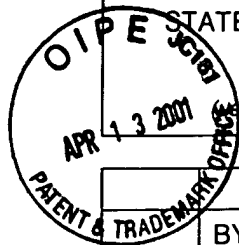
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				Biocatalysis Inc.			
	BY	WO	97/48416	Recombinant Biocatalysis, Inc.	12-24-1997		
	BZ	WO	97/48717	Recombinant Biocatalysis Inc	12-24-1997		
	CA	WO	97/48794	Recombinant Biocatalysis Inc	12-24-1997		
	CB	WO	98/00526	Recombinant Biocatalysis Inc	01-08-1998		
	CC	WO	98/01581	Recombinant Biocatalysis Inc	01-15-1998		
	CE	WO	98/05795	The Center for Blood Research, Inc	02-12-1998		
	CD	WO	98/13485	Maxygen, Inc.	04-02-1998		
	CF	WO	98/13487	Maxygen, Inc.	04-02-1998		
	CG	WO	98/24799	Diversa Corp.	06-11-1998		
	CH	WO	98/27230	Maxygen, Inc.	06-25-1998		
	CI	WO	98/28416	Novo Nordisk A/S	07-02-1998		
	CJ	WO	98/31837	Maxygen, Inc.	07-23-1998		
	CK	WO	98/36080	Maxygen, Inc.	08-20-1998		
	CL	WO	98/41622	Novo Nordisk A/S	09-24-1998		
	CM	WO	98/41623	Novo Nordisk A/S	09-24-1998		
	CN	WO	98/41653	Novo Nordisk A/S	09-24-1998		
	CO	WO	98/42832	California Institute of Technology	10-01-1998		
	CP	WO	98/48034	Diversa Corp.	10-29-1998		
	CQ	WO	98/53048	US Dept. of Health and Human Services	11-26-1998		
	CR	WO	98/58085	Diversa Corp.	12-23-1998		
	CS	WO	99/00137	Hemosol Inc.	05-27-1999		
	CT	WO	99/07837	Diversa Corp.	02-19-1999		
	CU	WO	99/08539	Diversa Corp.	02-25-1999		

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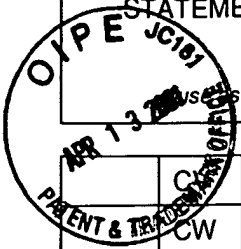
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	CW	WO	99/10472		Diversa Corp.	03-04-1999		
	CW	WO	99/10539		Diversa Corp.	03-04-1999		
	CX	WO	99/19518		Diversa Corp.	04-22-1999		
	CY	EP	0911396A2		Maxygen, Inc.	04-28-1999		
	CZ	WO	99/21979		Maxygen, Inc.	05-06-1999		
	DA	EP	0911396A3		Maxygen, Inc.	05-06-1999		
	DB	WO	99/23107		Maxygen, Inc.	05-14-1999		
	DC	WO	99/23236		Diversa Corp.	05-14-1999		
	DD	WO	99/25812		Hemosol Inc.	05-27-1999		
	DE	EP	0934999A1		Maxygen, Inc.	08-11-1999		
	DF	WO	99/41368		Maxygen, Inc.	08-19-1999		
	DG	WO	99/41369		Maxygen, Inc.	08-19-1999		
	DH	WO	99/41383		Maxygen, Inc.	08-19-1999		
	DI	WO	99/41402		Maxygen, Inc.	08-19-1999		
	DJ	WO	99/45154		Diversa Corp.	09-10-1999		
	DK	WO	99/57128		Maxygen, Inc.	11-11-1999		
	DL	WO	99/65927		Maxygen, Inc.	12-23-1999		
	DM	WO	00/42560		Maxygen, Inc.	07-20-2000		
	DN	WO	00/42561		Maxygen, Inc.	07-20-2000		
	DO	WO	00/53744		Diversa Corporation	09-14-2000		
	DP	WO	00/58517		Diversa Corporation	10-05-2000		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	DQ	Blom, B., et al., "Generation of Interferon α -producing Predendritic Cell (Pre-DC) ² from Human DC34 ⁺ Hematopoietic Stem Cells," <i>J. Exp. Med.</i> , 192(12):1785-1795 (December 18, 2000)	
	DR	Chang, C.C.J., et al., "Monocyte-Derived CD1a ⁺ and CD1a ⁻ Dendritic Cell Subsets Differ in Their Cytokine Production Profiles, Susceptibilities to Transfection, and Capacities to Direct Th Cell Differentiation," <i>The Journal of Immunology</i> , 2000, 165:3584-3591	
	DS	Chang, C., et al. (1999) "Evolution of a cytokine using DNA family shuffling." <i>Nature Biotechnology</i> 17:793-797.	

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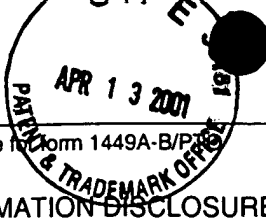


<p>Substitute for form 1449A-B/B2</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>	Complete if Known	
	Application Number	09/760388
	Filing Date	January 10, 2001
	First Named Inventor	Juha Punnonen
	Group Art Unit	Unassigned
	Examiner Name	Unassigned
	Attorney Docket Number	02-102320US

DT	Christians, F.C. et al., (1999) "Directed evolution of thymidine kinase for AZT phosphorylation using DNA family shuffling." <u>Nature Biotechnology</u> 17:259-264.
DU	Crameri et al., (1993) "10(20)-Fold aptamer library amplification without gel purification," <u>Nuc. Acids Res.</u> 21(18):4410.
DV	Crameri, A. & Stemmer W.P.C. (1995) "Combinatorial multiple cassette mutagenesis creates all the permutations of mutant and wildtype cassettes." <u>Biotechniques</u> 18:194-195.
DW	Crameri, A. et al. (1996) "Improved green fluorescent protein by molecular evolution using DNA shuffling." <u>Nature Biotechnology</u> 14:315-319.
DX	Crameri, A. et al. (1996) "Construction and evolution of antibody-phage libraries by DNA shuffling." <u>Nature Medicine</u> 2:100-103.
DY	Crameri, A. et al., (1997) "Molecular evolution of an arsenate detoxification pathway by DNA shuffling." <u>Nature Biotechnology</u> 15:436-438
DZ	Crameri, A. et al., (1998) "DNA shuffling of a family of genes from diverse species accelerates directed evolution." <u>Nature</u> 391:288-291.
EA	Gates, C.M. et al., (1996) "Affinity selective isolation of ligands from peptide libraries through display on a lac repressor 'headpiece dimer'." <u>Journal of Molecular Biology</u> 255:373-386.
EB	Minshull, J., Stemmer, W.P.C. (1999) "Protein evolution by molecular breeding." <u>Current Opinion in Chemical Biology</u> 3:284-290.
EC	Ness, J. et al., (1999) "DNA shuffling of subgenomic sequences of subtilisin." <u>Nature Biotechnology</u> 17:893-896.
ED	Nestle, F.O., et al., "Vaccination of melanoma patients with peptide- or tumor lysate-pulsed dendritic cells," <u>Nature Medicine</u> , 4(3):328-332 (March 1998)
EE	Patten, P.A. et al., (1997) "Application of DNA Shuffling to Pharmaceuticals and Vaccines." <u>Current Opinion in Biotechnology</u> 8:724-733.
EF	Spits, H., et al., "Id2 and Id3 Inhibit Development of CD34 ⁺ Stem Cells into Predendritic Cell (Pre-DC) ² but Not into Pre-DE1: Evidence for a Lymphoid Origin of Pre-DC2," <u>J. Exp. Med.</u> , 192(12):1775-1783 (December 18, 2000)
EG	Stemmer, W.P.C. (1994) "DNA Shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution." <u>PNAS</u> 91:10751
EH	Stemmer, W.P.C. (1994) "Rapid evolution of a protein in vitro by DNA shuffling." <u>Nature</u> 370:389-391.
EI	Stemmer, W.P.C. (1995) "The Evolution of Molecular Computation." <u>Science</u> 270:1510
EJ	Stemmer, W.P.C. (1995) "Searching Sequence Space." <u>Bio/Technology</u> 13:549-553.
EK	Stemmer, W.P.C. (1996) "Sexual PCR and Assembly PCR." In: <u>The Encyclopedia of Molecular Biology</u> . VCH Publishers, New York. pp. 447-457.

Examiner Signature		Date Considered	
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	Filing Date	January 10, 2001
	First Named Inventor	Juha Punnonen
	Group Art Unit	Unassigned
	Examiner Name	Unassigned
	Attorney Docket Number	02-102320US

	EL	Stemmer, W.P.C. & Soong, N.W. (1999) "Molecular breeding of viruses for targeting and other clinical properties." <i>Tumor Targeting</i> 4:59-62.	
	EM	Timmerman, J. M., et al., "Dendritic Cell Vaccines for Cancer Immunotherapy," <i>Annu. Rev. Med.</i> 1999, 50:507-529	
	EN	Yssel, H., et al., "Serum-Free Medium for Generation and Propagation of Functional Human Cytotoxic and Helper T Cell Clones," <i>J. Immunol. Methods</i> , 72(1):219-277 (1984)	
	EO	Zhang, J. et al., (1997) "Directed evolution of an effective fucosidase from a galactosidase by DNA shuffling and screening." <i>Proceedings of the National Academy of Sciences, USA</i> 94:4504-4509.	

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